

In re Appln. Of: Xavier Prignon
Application No.: 10/586,236

AMENDMENTS TO THE DRAWINGS

The attached sheet replaces the original sheet that included Fig. 1.

Attachment: Replacement Sheet(s)

REMARKS

The Office Action dated December 7, 2007 has been carefully considered. In the Office Action, claims 1-14 were indicated to be rejected. Additionally, objections to a drawing and claims were made. Applicant has amended the drawing, claims 1-14 and added claims 16-18. No new matter has been added by these amendments. Applicant respectfully requests reconsideration and re-examination in light of these amendments and the following remarks.

First, turning to the formal issues, Applicant notes that figure 1 was objected for not indicating that the drawing illustrated a prior art. Applicant has included a replacement sheet denoting the figure 1 as "Prior Art". The replacement sheet was also labeled as "Replacement Sheet" in the page header according to 37 CFR 1.84(c). In light of this amendment to the drawing, Applicant respectfully requests that the objection to the drawing be withdrawn.

As to other formal objections, claim 1 and its dependent claims 2-13 were objected for informalities. Following the Examiner's recommendation, claim 1 was amended to read "A dynamic air classifier . . .", and claims 2-13 were amended to read "The dynamic air classifier . . .". Similarly, claim 14 was amended to read "A method of separation . . .". Accordingly, Applicant respectfully submits that this objection has been obviated.

Turning next to the § 112 rejections, the Examiner has rejected claims 8 and 12 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner indicated that "the air-extract duct" recited in claims 8 and 12 lack antecedent basis. In response, Applicant has amended claims 8 and 12 to read "an air-extraction duct". Therefore, Applicant respectfully submits that this ground of rejection has been obviated. Reconsideration and indication of the allowability of claims 8 and 12 are respectfully solicited.

Turning to the prior art rejections, the Examiner has rejected claims 1-14 under 35 U.S.C. §102(b) as being anticipated by Hanke, US Pat. No. 4,869,786. Applicant has thoroughly considered the Hanke reference and the Examiner's application

thereof. In response, Applicant has amended claim 1 to clarify the claimed invention and requests examination of the structure with the "adapted to" language that must be considered according to the case law cited below. This ground of rejection with regard to independent claim 14 and other dependent claims are also separately traversed. Reconsideration of this ground of rejection in view of the amendments and following remarks and indication of the allowability of claims 1-14 are respectfully requested.

In rejecting claims 1-14, the Examiner indicated that claims included claim language consisting of functional language and/or intended use phrasing which has been given little, if any, patentable weight. Specifically, the Examiner stated "the device cited above is certainly capable of using the vortex created by the rotary cage for cycloning said material and extracting air through the bottom duct (near 20)." In response, claim 1 has been amended to more definitely define the claimed structure. Claim 1 as amended now recites "a rotary cage (1) adapted to created a vortex when subject to fluid flow" and "the recovery chamber (2) adapted to use the vortex created by the rotary cage". Such amendment is consistent with the Court's holding regarding allowable languages to define a claimed structure. The Court has held that limitation including "members adapted to be positioned" in a claim directed to a kit of component parts capable of being assembled serve to precisely define present structural attributes of interrelated component parts of the claimed assembly. See MEPE § 2173.05(g) citing *In re Venezia*, 530 F.2d 956 (CCPA 1976). As such, Applicant respectfully submits that claim 1 as amended defines the claimed structure which is distinguishable over the prior art as discussed in detail below. That is, it defines the structural interrelationships that are missing in the cited prior art.

It is axiomatic in the patent law that to reject a claim under 35 U.S.C. §102, each and every limitation must be found, expressly or inherently, in a single reference and arranged as required by the claims such that the reference discloses the identical invention. See MPEP §2131. It is respectfully submitted that the Hanke reference does not teach each and every limitation of claim 1, to wit "a recovery chamber (2) for fine materials . . . said recovery chamber (2) coaxially arranged in a protrusion of the rotary cage (1), the recovery chamber (2) adapted to use the vortex created by the rotary cage for cycloning said material".

Hanke teaches a multistage classifier including a first air classifying stage 1 and a second air classifying stage 2. The Examiner has denoted the second air classifying stage 2 as being equivalent to the recovery chamber (2) of claim 1, and the first air classifying stage 1 as being equivalent to the rotary cage (1) of claim 1. However, the second air classifying stage 2 is not adapted to use the vortex created by the first air classifying stage 1 for cycloning the materials as required by amended claim 1.

Additional and traversing on further grounds, claim 1 requires that the recovery chamber (2) to be arranged in a protrusion of the rotary cage (1), allowing direct communication between them, such that the recovery chamber (2) is adapted to use the vortex created by the rotary cage (1). However, as shown in FIG. 2 and explained in col. 5, lines 17-64, the second air classifying stage 2 of Hanke is not arranged in a protrusion of the first classifying stage 1. Rather, the coarse material hopper 8 and the upper closed end wall 13 are disposed between the first air classifying stage 1 and the second air classifying stage 2. Thus, the second air classifying stage 2 is not directly connected with the first classifying stage 1 and any communication between them is through the coarse material hopper 8, which is mostly closed by the upper closed end wall 3. In such a structure, the vortex created in the first air classifying stage 1 is mostly contained within the first air classifying stage 1 and does not transfer to the second air classifying stage 2. Thus, the second air classifying stage 2 is not adapted to use the vortex created by the first air classifying stage 1. In fact, the air classifying stage 2 is equipped with its own vortex creating device, namely a centrifuge basket 14 which may be operated at a different speed than the first classifying stage 1. See Hanke, col 5., lines 53-67. Therefore, Applicant respectfully submits that Hanke fails to teach or suggest all of the limitations of claim 1. Reconsideration of this ground of rejection and indication of the allowability of claim 1 is respectfully solicited.

Further, Applicant has added dependent claims 16-18 to more clearly define the claimed structure including the recovery chamber (2) directly connected to the rotary cage (1) such that the recovery chamber (2) is adapted to use the vortex created by the rotary cage (1), as discussed above. No new matter has been added by these amendments.

With regard to claim 4, claim 4 recites that the recovery chamber (2) has a length that corresponds to 2 to 6 times the length of the rotary cage (1). Hanke teaches the exact opposite of this limitation. Instead of requiring that the recovery chamber (2) be longer than the rotary cage (1), Hanke states in col. 5, lines 56-58, "the centrifuge basket 14 of the second air classifier stage 2 has a smaller vertical extension than the first centrifuge basket 9." That is, Hanke discloses a structure which includes a shorter second classifying stage 2 than the first classifying stage 1. Again, this is direct opposite of what claim 4 teaches. Reconsideration of this ground of rejection and indication of the allowability of claim 4 is respectfully requested.

Claims 2, 3 and 5-13 depend on claim 1. As discussed above at length, Hanke does not teach or suggest all of the limitations of claim 1. Therefore, Applicant respectfully submits that claims 2, 3 and 5-13 are not anticipated by Hanke. at least for this reason. Reconsideration of this ground of rejection and indication of the allowability of claims 2, 3 and 5-13 at an early date are respectfully requested.

Finally, the Examiner rejected claim 14 stating "the claimed method is anticipated in the normal operation of the device cited above." Claim 14 includes steps of "rejecting the large particles towards the refuse chamber (17); recovering the fine material fine materials in the recovery chamber (2)" and "separating the dedusted air and the fine particles" That is, claim 14 requires coarser materials to be separated in the rotary chamber (1) and rejected to the refuse chamber (17), while the fine materials are transferred to the recovery chamber (2) for further separation into dedusted air and fine materials. However, the normal operation of the device of Hanke would result in the exact opposite of the method taught in claim 4. In the Hanke reference, fine materials are separated and disposed from the first air classifying stage 1 and coarser materials are transferred to the second air classifying stage 2 through the coarse material hopper 8. See Hanke, col. 5, lines 38-43, and 53-58.

Further, unlike the method of claim 14 wherein the separation of dedusted air and fine particles occur in the recovery chamber (2), the separation of air and fines is achieved by a external dust separators in Hanke. See Hanke, col. 5, lines 38-43 stating "The fines . . . are sucked out to the following dust separators"

In re Appln. Of: Xavier Prignon
Application No.: 10/586,236

Claim 14 also includes a step of "using the vortex created by the rotary cage . . . for cycloning the fine material". As discussed above with regard to claim 1, the second air classifying stage 2 of Hanke utilizes its own centrifuge basket 14 to create a vortex for air classification, and thus, it does not use the vortex created by the first air classifying stage 1. Reconsideration of this ground of rejection and indication of the allowability of claim 14 is respectfully solicited.

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Extension of Time and Fee Deficiency

Applicant believes that a two month extension of time is required. However, this conditional petition is being made to provide for the possibility that Applicant has inadvertently overlooked the need for a petition and any additional fee for extension of time. If any additional fee is required, or any overpayment is made, in connection with this communication please charge or credit deposit account No. 50-3505.

Respectfully submitted,

/Sun Y. Pae/

Sun Y. Pae, Reg. No. 16401
Reinhart Boerner Van Deuren P.C.
2215 Perrygreen Way
Rockford, Illinois 61107
(815) 633-5300 (telephone)
(815) 654-5770 (facsimile)

Date: May 6, 2008